

## **REMARKS/ARGUMENTS**

As explained more fully below, Applicant has amended independent claims 68, 73 and 74, and claims 69-72 depending from claim 68, to more clearly define the claimed invention. Applicant requests reconsideration of claims 68-74 in view of the Amendments and Remarks set forth herein.

### **Abstract**

In the non-final Office Action, the Examiner objected to the Abstract. As submitted in the Amendment to the Specification section herein, Applicant submits the Abstract on a new separate sheet in accordance with 37 C.F.R. § 1.52(b)(4). Applicant requests entry of such Abstract.

### **Claim Objections**

In the non-final Office Action, the Examiner objected to claim 69, stating claim 69 contained a grammatical error. Applicant has amended claim 69 to correct such error. Claim 69, in part, now recites "a number of units of each of said corresponding assets in said portfolio." Support for such amendment can be found on lines 11-18 of page 77 of the originally filed PCT application, PCT/US99/30640, which this application is based therefrom. Accordingly, Applicant hereby requests the Examiner to withdraw such objection to claim 69.

### **Claim Rejections Under 35 U.S.C. § 112**

The Examiner rejected claims 68-74 under 37 U.S.C. § 112. First, claim 69 was rejected as indefinite because the words "the umber" in claim 69 have no antecedent basis. As noted above, claim 69 has been amended to recite "a number of units of

each of said corresponding assets in said portfolio." Such amendment overcomes the rejection of claim 69. Withdrawal of such rejection is respectfully requested.

Second, the Examiner rejected claims 68-74 as indefinite, indicating that these claims omitted "essential steps, such omission amounting to a gap between the preamble that states that the method is for optimizing, while there is no actual step of optimization recited within the claims." Applicant has herein amended independent claims 68, 73 and 74 to change "searching for optional ones of said portfolio of assets" to "searching for optimal ones of said portfolio of assets." Support for such amendment can be found on lines 1-18 of page 77 and element 2630 of FIG. 26 of the above-identified PCT application. Such amendment overcomes these rejections of independent claims 68, 73 and 74. Additionally, since claims 69-72 depend from and include all of the limitations of claim 68, claims 69-72 also overcome these indefiniteness rejections. Accordingly, Applicant hereby requests the Examiner to lift such rejections of claims 68-74.

Third, the Examiner rejected claim 68 as indefinite, stating that the limitation "said optimal distance" in claim 68 does not have an antecedent basis. Applicant has amended "said optimal distances" to "said at least one optimal searching distance." Accordingly, the 112 rejection of claim 68 is no longer applicable and is respectfully requested to be withdrawn.

Last, the Examiner has rejected claim 70 as indefinite, stating the term "the difference" has no antecedent basis. Applicant has amended various parts of claim 70. The phrase "the difference between said vector of said first portfolio and said vector of said second portfolio" is clear from its meaning - "the difference" meaning the result from subtracting the first portfolio vector from the second portfolio vector. Applicant

believes this is not indefinite. Applicant respectfully requests the Examiner to lift this rejection of claim 70.

**Claim Rejections Under 35 U.S.C. § 101**

In the non-final Office Action, the Examiner rejected claims 68-74 suggesting the claims are directed to non-statutory subject matter. The Examiner argued that the claims lacked a concrete result as well as a tangible result. As amended claims 68-74 herein, Applicant submits that claims 68-74 are directed to statutory subject matter.

The Examiner has contended that the results of the claims do not produce a result that can be substantially repeated. Applicant disagrees. As amended herein, Applicant's claims feature a series of steps "for determining an optimal portfolio of assets," as recited in the amended preamble of the independent claims. The result of the method can clearly be repeated. The Examiner suggested that the claims lacked a baseline. Applicant disagrees and submits that the method determines "at least one optimal searching distance" and then searches for one or more optimal portfolios based on the "at least one optimal searching distance."

In regards to the tangible result, Applicant has amended independent claims 68, 73, and 74 to recite that the "optimal ones of said portfolios of assets" resulting from the search are presented on a display, producing a tangible, "real-world" result. (Support for such amendment can be found on pages 85-86 and FIG. 30 of the originally filed application.)

Accordingly, independent claims 68, 73 and 74, and all claims depending therefrom, are directed to statutory subject matter. As such, Applicant respectfully requests the § 101 rejections of claims 68-74 be withdrawn.

### Claim Rejections Under 35 U.S.C. § 103

Claims 68-74 were also rejected under 35 U.S.C. § 103(a) as unpatentable under U.S. Patent Number 5,799,287 to Dembo. To the extent the rejection would be applied against the claims, as amended, Applicant respectfully transverses.

For a proper rejection based on Section 103(a), the prior art reference (or references when combined) must teach or suggest all the claim limitations. M.P.E.P. § 2143. The rejection set forth in the Office Action does not meet this burden. Additionally, Applicant notes that this is an improper rejection under § 103 because the Office Action has not combined Dembo with another reference or any other knowledge of one skilled in the art. Such a rejection is improper for that reason alone.

Dembo describes a method for determining an optimal replicating portfolio for a given target portfolio. A user in Dembo defines a target portfolio to be replicated. This portfolio of Dembo is one that uses risk versus reward to decide which risks may be worth pursuing to reap the highest profit. This criteria is then applied to establish a portfolio that replicates the user-defined target portfolio.

However, nowhere does Dembo discuss "determining a fitness landscape with respect to a set of portfolios of assets." The landscape can be inferred from historical data using techniques described in U.S. Application No. 09/345,441, "An Adaptive and Reliable System and Method for Operations Management," which was incorporated by reference to the originally-filed application of the present invention. Not only does Dembo not determine a fitness landscape, but Dembo does not determine this landscape with respect to a set of portfolios of assets. If anything, Dembo is looking at market tools only. However, these market tools are not analyzing the landscape with regard to a specific

set of portfolios; instead, Dembo would analyze market tools with respect to the market as a whole.

Additionally, Dembo does not determine "at least one optimal searching distance." The present application discusses determining an optimal searching distance by incorporating international application PCT/US99/19916 by reference. (See page 77 of the disclosure of the present application). On the other hand, Dembo teaches optimizing using a risk versus reward scenario only. This is not the same as the "optimal searching distance," as recited in independent claims 68, 73 and 74.

The Office Action suggests that each independent claim recites "searching for optimal distances." Applicant disagrees. Independent claims 68, 73 and 74 recite "determining at least one optimal searching distance" and "searching for optimal ones of said portfolios of assets at said at least one optimal searching distance." The Office Action does not identify where either of these elements is taught or suggested by Dembo. However, Applicant has thoroughly reviewed Dembo and respectfully submits that Dembo does not teach or suggest either of these elements.

Additionally, the Office Action asserts that "Dembo discloses vectors used to identify numbers and differences in portfolios . . . ." In contrast, independent claim 69, as amended, recites:

"each of said portfolios of assets comprises a vector corresponding to said assets of each corresponding portfolio wherein each element of said vector identifies a number of units of each of said corresponding assets in each of said portfolios"

Dembo discloses that each portfolio comprises a vector, but Dembo does not disclose that each element of the vector identifies the number of units of each portfolio asset.

Furthermore, the Office Action asserts that Dembo discloses ". . . the use of additional data when determining the fitness of the landscape", presumably in reference to dependent claim 72. Applicant submits, however, that dependent claim 72 recites "inferring said fitness landscape representation from historical data." In addition, Dembo does not even mention historical data, much less teach or suggest the element of inferring the fitness landscape representation based from historical data.

Accordingly, it is respectfully submitted that independent claims 68, 73 and 74, as amended, and the claims depending therefrom, are patentable over Dembo and that this rejection should be withdrawn.


\* \* \* \* \*

In view of the amended claims and the remarks presented above, it is respectfully submitted that all of the present claims of the application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicant's undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 13-4365.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "H. B. Ward, III". The signature is stylized with a large, looped initial "H" and a cursive "B".

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